

432 MHz AND ABOVE EME NEWS

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CONDITIONS

I am afraid that almost all the activity reports this month are for 1296 where conditions were quite good. Unfortunately not enough 70 cm reports were received to give a clear picture of happenings on this band. There was certainly activity on 432 during the Aug activity weekend. Part of the problem is the vacation schedule with many key operators away on holiday. I did not help by spending the little moon time I had on 23 cm. This won't happen in Sept. The Sept SW is the last chance to check out systems and equipment before the ARRL EME Contest at a time of significant activity.

RIO 2000 REPORT

I have always said the best part of a conference is not the formal sessions but the time spent talking in small groups on a one to one basis. The formal sessions were great, and very professionally done. There was excellent media equipment and several technicians to make sure the presentations went well. But what made this conference so special was the group size. Large enough to represent divers interests from all over the globe, and yet small enough to coalesce into a group that could that could go and do things not possible at a larger conference. The party really started on Thursday when Don, PY5ZBU arrived and continued through Monday. Some of the gang stayed around Rio for the remainder of the week to enjoy the excellent weather and sights. Rio is one of the most beautiful cities I have visited. Food and shopping were very reasonable compared to the US and Eur. The formal conference presentations ranged from 1296 solid state amplifier combiner design to TWTAs and from the latest news on 6 m EME to 24 GHz - WA7CJO is hearing echoes on this band. Don and his associates from the Araucaria DX Group and INEPAR went out of their way to make to conference memorable. I can not say enough about the attention to detail of the organizing committee. The food was incredible with coffee breaks that were more like multi-course breakfasts, and all you can eat meals that feature every sort of food imaginable. On Saturday night there was a mystery bus ride that took the conference to Buzios, a luxury beach resort several hours north of Rio made famous by Bridget Bardot. There we were treated to a visit of a private astronomical observatory to see the southern sky something most of us had never seen before. This was one of the highlights of my trip. The group spent the night in Buzios at a lovely beach hotel. The next day we returned to Rio to conclude the

conference and another sumptuous meal. The major decisions reached at Rio was an overwhelming endorsement for the use of circular polarization on the microwave bands, and the selection of Prague in the Czech Republic as the site for the 2002 Conference. My thanks to the conference organizing team of Aldenor, PY5EJ, Atilano, PY5EG, Don, PY5ZBU, Cleide Larson, Eduardo Carmona and Sonia Bombardelli for a truly outstanding EME Conference, one which all who attended will not forget and treasure.

SETI EME BEACON

The SETI League of which Paul, N6TX is Executive Director has received a grant to set up an EME Beacon on 1296 MHz. The purpose of this beacon will be to help SETI volunteers calibrate their listening systems. The beacon will also be useful to 23 cm EME operators as a reference for checking out our systems. More information can be found at:

[SETI League 1296 EME Beacon](#)

I will also keep you informed of beacon developments.

4X1KS

Mark in Jerusalem, Israel is interested in getting on EME. He presently has a 7' dish and 10 W on 1296, but is working on a 100 W PA. On 432 he has 100 W to single long yagi (Cushcraft 719B) that he uses for Oscar10, but is considering building up a larger array. He is willing to try skeds on 70 cm with the bigger stations and can be reached at martek@zahav.net.il. Mark will appreciate any ideas and help.

AL7OB

Mike (BP51dc) says that Sept will probably be the last month for activity with his yagi array as his new big dish is nearing operational status. He was QRV in Aug with the old system of 16 x NBS yagis, DEM 0.4 dB NF LNA and 700 W PA, but reports no new QSOs. He can be reached for skeds at melum@customcpu.com, and details of his dish's progress can be found at:

[AL7OB WEB Page.](#)

DL4KG

Gerald is pleased to announce -- I am back on 432 MHz EME after my move to the southern part of Germany and a year of no activity. My new QTH is in JN48ou (previous JO31MB) and thus I count as a new initial. [Absolutely!] The system still consists of TS-850, homemade transverter, PA GS23B and 4x29 el BV

(8.5 WL) yagis. Sun noise is about 12 dB and I can hear/detect my echoes all the time. During tests I tried some DSP software and found it very useful to find my weak signals. I was able to adjust my antenna heading with the help of DSP. I will use Hamview software the next time I'm on.

DL7APV

Bernd has been working on his 70 cm EME system during his summer holidays. He had hoped to get more done, but says he will definitely be QRV for the ARRL EME Contest with at the least 4 x 11 wl 9BV yagis. I am waiting for the elevation rotor and a new frame for a new 8 x 13 wl array. My goal is to be fully QRV for the contest.

G4CCH

Howard was impressed by the great SSB signals in Aug -- Since my last report, I have received a new pre amp from Tommy - WD5AGO. I have spent some time testing and making comparisons with my newly repaired G3WDG stripline preamp with MGF4919 HEMT. The AGO pre amp seems marginally better; so it's now my #1 LNA. I was QRV during the Aug activity weekend and had a great time again. A total of 30 QSOs were made and 2 initials were added. There were some very loud signals around and activity was all concentrated in the 10 KHz between 1296.010 and .020 making it difficult to copy some of the weaker signals at times. I QSO'd on 26 Aug JA4BLC (539/559), HA5SHF (539/569), OK1CA (549/549), ZS6AXT (549/579), F5PAU (589/569), VE1ALQ (569/559), K3AX (539/549), HB9BBD (57/54) on SSB, VE1ALQ (54/55) on SSB, DJ5MN (549/569), WA4OFS (429/449) for initial #113, W7QX (439/449), PA3DZL (339/549), W7QX (439/449), W7GBI (549/539) and W2UHI (559/549), and on 27 Aug PA3DZL (439/449), OH2DG (539/559), DF9QX (559/559) #114, F5PL (559/559), DJ9YW (549/549), OK1DFC (549/559), SM3AKW (559/569), HB9BBD (59/57) on SSB, OZ6OL (549/559), K2UYH (55/55) on SSB, K5JL (589/569), IK2MMB (559/559), K2DH (569/569) and HB9Q (559/559). Getaways were I0UGB - heard working HB9BBD on SSB, OE5EYM and HB9SV. I will be active again in Sept and will be available for sked. It really is great to hear so many signals off the moon, and with better levels than I had expected. I have recently added more examples of the kind of signals that I hear as Real Audio files on my web site at:

[G4CCH WEB Page](#)

Please note that I am in the process of changing my e-mail address. Always send mail to me at: **[G4CCH](#)**
This address is an alias and mails should get to me irrespective of which server I am using.

G8VR

Ken trying to copy 1296 signals off the Moon with very simple antennas. So far he has had no luck. He sends the following information on the early days of EME -- I am 81 now but still quite active. Recent bulletins from David, GM4JJJ and Ian, G3SEK mentioned pioneer EME work by W1ZIG and K1HMU on 144. Though not going back quite that far, I have a set of beautiful Eimac EME bulletins published in the 1970's, filled with photographs of dishes and yagi arrays dating back to the 1960's. The sheer size and complexity of some of the antenna systems built by amateurs in basement workshops has always fascinated me. The bulletins also contain old QST articles by authors such as Al, K2UYH and Joe, W1JR (W1JAA or W6FZJ was his call in those days). It's good that the long list of active EMEers at the time includes several still aiming at the Moon today. Also featured is the 128 element 432 MHz array of Peter, ZE5JJ, a long-gone prefix, which will bring a touch of nostalgia to some old-timers. (How many still around worked Peter under that call?) And what about the constructional article by W6PO for a state of the art preamp for 144 MHz using a Siliconix U310 or a 2N5397? If you fancy building one I can supply a full set of drawings. I like an article on W7FN's big array in which he comments on some of the factors that influenced the design, e.g. 1. Weather -it's wet in the North West, 2. Neighbors - Locate antenna close to ground in backyard to minimize visual impact, 3. Motorized EL-AZ - none, antenna may not work- wait and see. All of which still apply! In the 1970's my call was G8VR/W1, and I lived in a condominium near Hartford, CT, where no antennas were permitted. However I could sit in my living room and, with 18 inches of coat hanger stuck in the back of my TS 700, listen to K1WHS up in Maine working stations off the Moon with his 300-plus elements. One night there was a sizeable aurora, so I called him using my coat-hanger set-up and he came straight back. A couple of years later when I was back in the UK and again worked Dave on 144, but this time via the Moon using 350 W to a 16 el yagi. Another huge New England signal in those days was Steve, WA1FFO, later K1FO of course. I was briefly an EMEer from CT. Bob Atkins, KA1GT, and I put together a somewhat shaky array of 128 el quagis for 432. I worked Charlie G3WDG... Oh happy days!

HA5SHF

Csaba sends the following summary of his group results on 1296MHz and on 2320 this summer: They worked on 13 cm on 3 June at 16:47 OE9ERC (559/M) for the 1st QSO from Hungary on 2320, and on 1296 on 3 June at 1737 OX2K (569/559) for initial #55 and DXCC 23 and 0317 G4CCH (559/529) #56, on 30 July at 1242 CT1DMK (O/O) #57 and DXCC 24, on 26 Aug at 0256 JA4BLC (M/O) #58, 0600 OK1CA (O/O) #59, 0615 G4CCH (569/539), 0930 W3XS nil on sked, 0955 HB9BBD (579/529) and (56/42) on SSB, 1030 I0UGB (559/539) #60 and DXCC 25, 1126 ZS6AXT (449/O), 1155 OZ6OL (M/M), 1230 W7SZ (M/O) #61 and WAS 10 and 1300 W7GBI (O/O) #62, and on 27 Aug at 0536 HB9Q (569/529) #63, 0800 G3LTF nil on sked, 0835 HB9BBD (579/529), 0900 DJ5MN

nil on sked, 1000 IK2MMB (O/O) #64, 1202 HB9SV (579/559), 1213 K2UYH (559/549) and 1241 K5JL (569/559).

K3AX

Harry was active during the Aug SW on 1296. He CWNR W7SZ many times, but did worked about 9 stations other stations.

K5JL

Jay had a great time in Rio. He returned just in time to get on 23 cm during the Aug SW and worked about dozen stations. Signals were particularly good from W7QX, K3AX, HA5SHF and W6HD during the weekend.

OK1DFK

Franta was on the 26th during the Aug SW -- I worked on 1296 HA5SHF (O/O) for initial #67 and new country, G4CCH (549/549), VE1ALQ (549/449), ZS6AXT (449/559) and HB9BBD (579/569). I also heard OK1UWA and F5PAU, but had to QRT early because of strong QRN.

PY5EG

Atilano who supported and helped organize the RIO2000 EME conference and has been bitten by the EME bug. He expresses his extraordinary pleasure on his opportunity to meet with so many EMEers at the conference, and learn about the fantastic hobby of moonbounce. He hopes to be QRV on 70 cm before long, and can be reached at: [PY5EG](#)

S57UUU

Marko also sends word of his pleasure in attending the EME Conference in Brazil. He also wants to alert everyone that his e-mail alias: [S57UU doesn't always work.](#)

He recommends use of [S57UU, which should be more reliable.](#)

VE1ALQ

Darrell is rewiring his shack so that there is no interference, particularly from computer and other electrically noisy devices. He also has a project to make his own waveguide adapters for his 10 GHz EME system. During Aug he worked W2WD for an initial on 70 cm.

W2UHI

Frank connected with K9BCT on 23 cm in Aug. He also heard ZS6AXT, W7SZ, OZ6OL, VE1ALQ, W7GBI, PA3DZL, G4CCH, IK2MMB, OK1DFC, K5JL and DJ9YW during the SW. He asks to "please remind those that call CQ and then hear YYYY from another station, this means to repeat only your call sign with proper spacing so that the station answering your CQ can dig out your call."

W2WD

Warren disappointed we could not make RIO2000, but reports some progress in debugging his portable EME station I had the dish up for quite a while, but still not totally happy with the results, particularly with my weak and inconsistent echoes. The following is a summary of successes and failures: K4AR nil, K1FO CWNR, N9AB CWNR, NL7Q nil, PA4FP (O/O), EA3DXU nil, RW1AW O/O, I5TDJ nil, DF3FI partial (O/-), VE1ALQ (449/549), SM3AKW (M/M) but no R's and K8UC nil. The moon is now south of my window, so I have dismantled the dish to keep the neighbors and zoning officer off my back. I intend to put it up when the moon comes back into view again. Calibrating the azimuth readout is still one of the major problem areas. Hopefully, I will be in good shape for the Italian EME test.

W5LUA

Al reports that he worked on 28 Aug on 5760 EME WA5ICW in EM26 OK. Al believes that Jim (WA5ICW) was running a 5 m dish and about a 100 W, and heard him with a nice (559) signal off the moon.

W7CNK

Lucky is now QRV with a new 16' aluminum dish. He was on 432 for a short time during the Aug SW and worked 1 JA. Little was heard from Eur.

W7GBI

Charlie writes -- I really enjoyed the conference in Rio. I especially was happy to get to talk with all the guys there. Since my return, I have gotten on 1296. I haven't been on 1296 for almost a year. I was on during the Aug SW and managed to work 6 stations. I had a sked with HA5SHF and worked them easily along with W7SZ, G4CCH, F5PL, W2UHI and K4QI. I will probably spend more time on 23 cm now, but I am about to start echo testing on 5760. I have about 70 W and a 12' dish. I am getting 14 dB of sun noise, and now that the WX is cooling off, I will get back on this project.

W7SZ

Larry used the Aug SW to evaluate performance of a recently completed DSP-10 transceiver For EME applications -- The DSP-10 was built from a construction article in Sept 99 QST. All functions are controlled via computer key board. PC display features: waterfall, moon az/el, Doppler, time base, signal strength in dB, etc. It's 25 mW output at 144 MHz was more than enough to drive my 23cm transverter. Results were very encouraging. On 26/27 Aug I made 11 contacts including 3 initials and one SSB contact. There was no problem with overload from the "big" stations. A real plus for me was the binaural audio feature. Contacts included W2UHI, VE1ALQ, G4CCH, W7GBI, F5PL for an initial (#), K2UYH on SSB, K5JL, HB9Q, K2DH, HA5SFH # and OH2DG#. Ultimately I would like to work QRP ops off the moon. My goal is a bandwidth of 10 Hz, and I

am making progress towards Doppler tracking.

W8TN

Clark reports that there is a new product for Ham-M and TailTwister rotors. It automates the rotor and even has an RS-232 option so you can interface your rotator with a computer. The URL is:

W8TN

Cost is \$US100 for the manual version and \$US130 for the RS-232 model.

WD5AGO

Tommy is preparing for the ARRL EME contest. He hopes to be on QRV 5 GHz as well as 432 and 1296 for the contest. He also considering 222 EME and can QRV if there is interest. Tommy will be available for EME during the days for the next few weeks.

ZS6AXT

Ivo was active on 1296 during the SW, but is nearly ready for 10 GHz I QSO'd on 26 Aug G4CCH, F5PAU, OK1CA, VE1ALQ, DJ5MN, HB9BBD, WD5AGO, HA5SHF, W2UHI and K9BCT on horizon, and heard I0UGB on SSB, and on 27 Aug HB9Q, DJ9YW, SM3AKW, F5PL, K3AX, W2UHI, K2UYH and K5JL, and heard OZ6OL, IK2MMB, OK1DFC, PA3DZL, G4CCH and DF9QX. Signals were generally very good, thanks to perigee. I now have 2 transverters (DB6NT) for 10 GHz running, but still am missing PSUs for my TWTs, preamp and a suitable dish. I have found only some for 4 GHz satellite TV that will be not be too good. I think I have a lead on a 1.5 m dish from 12 GHz link, but feel that it will be too small. There is no chance to extend it as it is very deep - f/D about 0.27. I suppose for TR switching, I will do better with the waveguide switch, which I have, than with an SMA coaxial relay. No tests as yet have been done with the new 6 cm setup for the feed. I hope to have it done soon, while the good weather lasts. I wonder - was there any discussions and/or decisions on the polarization change for 6 and 3 cm in Rio? [The recommendation was that we should all use circular pol on the microwave bands.]

K2UYH

The RIO2000 conference turned out to be something very special because of the great job done by the organizing committee and the turnout see my comments on the conference above. I returned from Rio on Saturday and missed the 1st day of the Aug SW, but was able to get on 1296 on Sunday and picked up an initial. I QSO'd on 27 Aug at 1159 OZ6OL (549/559), 1212 HA5SHF (549/559), 1222 ZS6AXT (559/569), 1240 DJ5MN (569/579), 1251 G4CCH (56/56) on SSB, 1311 OK1DFC (559/569), 1317 partial W2UHI (569/-) I responded on SSB to his CW call and Frank never came back again, 1326 W7SZ (549/549), 1334 K3AX (549/559), 1506 HB9Q (569/559) and (55/53) on SSB for initial #177 and 1516

W7SZ (54/54) on SSB.

NETNEWS

by

[G4RGK, DAVID DIBLEY](#)

GM0ONN is planning to be QRV for the ARRL Contest.

K3LFO has a new e-mail address: [K3FO](#)

RW3PF (KO93cd) is looking for 70 cm EME skeds. I have no info on his system, but he can be reached at: [RW3PF](#)

K9BCT has made several receiver comparison tests and reports that a SOTA converter with an FT-1000 is much better than an FT-736, but as might be expected sun noise measures the same.

KA0RYT is setting up a new 70 cm yagi array and has many projects in the works.

VVE6NA had a visit from OE9ERC during Aug.

W0RAP has started to work towards getting the az/el systems of his 16' dish back into shape. Bob hopes to become QRV again soon.

WA9FWD has been busy around the house, but still found time to get a GI-7b PA working with low power. John is mounting it in a box and cleaning up the installation. He hopes to test it in the near future.

K5WXN was on 70 cm in Aug. He heard nil, not even echoes during the preSW, but worked 2 new ones and reports a fair amount of Eur activity during the SW.

PA3CSG is building a new mount for his 12' dish for 3 cm EME. He needs KY and NM for WAS on 70 cm.

9H1PA in the Philippe's, reports that 9H1ES has improved his sun noise and is making some progress.

WA1JOF is just about ready again for 23 cm EME with a much-improved system.

K1RQG working on his 32' dish and has it more than 75% completed thanks to the help of W1ZX who is driving the project.

W7QX contacted K5JL and HB9Q on 23 cm during the Aug SW.

K0YW now has the feed mount complete, and has modified the hub of his new dish for attachment. He hopes to have the tower and mount done soon.

N7EIJ has 4x9 wavelength M2 antennas for 70 cm and asks if these would be adequate for EME. [QSOs are definitely possible. The number of stations that can be worked will depend on the available power.]

W4TJ is still working towards returning to QRV status on EME.

AA5C is checking out his 10 GHz system in preparation for the fall EME contest.

K8UC is interested in skeds. He is QRV on 70 cm and is looking for big stations to run with. He worked KA0Y in Aug.

VE6TA will be QRV on 222 till the end of Sept.

KL7HFQ heard KA0Y with a big signal during the SW.

SM2CEW is working on a new cavity amp for 70 cm.

F1CH is now off 70 cm EME and is moving to 23 cm.

However, **F5KDK** is still QRV on 70 cm.

G4RGK is presently not available for 70 cm skeds due to work commitments. He is not equipped for 23 cm and has never been QRV on this band.

FOR SALE

[UR4LL](#) has **many Russian transmitting tubes available**. You can find detailed data and other interesting information at the ND2X WEB site, which has a new address:

[Russian Tubes](#)

K9BCT is **looking for a GR-1236 IF meter**.

PA3CSG has **a 10' dish available for pick-up. It is good to 10 GHz.**

WD5AGO is looking for an 8699C, 4-8 GHz plugin for a 8690B.

VE6TA is looking for a 4 tube amp for 23 cm.

KL7HFQ has a National 600 crane bearing that he has no plans to use available.

FINAL

On behalf of the EME Community I would like to express our feeling sadness and wishes of sympathy to EMEer Mike, SP5CJT, (brother of WA6PY) upon learning of the death of his wife after a battle with cancer.

-- Thanks again the Curitiba group. I don't think anyone could have a better job than they did in organizing an EME conference. An added benefit of this SA conference will be increased EME activity from this part of the world. I also would not be surprised if we hear about some SA EME dxpeditions in the very near future.

73, for the next 29, AI - K2UYH



[Most recent Schedules from Klaus, DL4EBY](#)

[Lunar Calendar for 1999 prepared by G3SEK](#)

[Netnotes by K1RQG](#)

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